

WHAT IS CLAIMED IS:

*Art. 61*

1. A liquid crystal panel comprising:  
a first substrate having one surface formed with a planarizing film, a plurality of pixels, and a light shielding region present between any adjacent ones of said plurality of pixels;  
a second substrate bonded to said first substrate with a given gap defined therebetween; and  
a liquid crystal layer filling said given gap;  
wherein said planarizing film has a flat surface formed with a projection abutting against an innermost surface of said second substrate adjacent to said liquid crystal layer to define said given gap between said first substrate and said second substrate, said projecting being located in said light shielding region.
2. A liquid crystal panel according to claim 1, wherein said projection is formed of the same material as that of said planarizing film.
3. A liquid crystal panel according to claim 1, wherein said projection is formed of a material different from that of said planarizing film.
4. A liquid crystal panel according to claim 1, wherein said flat surface of said planarizing film is provided with a pixel electrode not covering said projection in a region corresponding to each pixel.

*Art. 62*

5. A liquid crystal panel according to claim 1, wherein said projection has an end surface whose area is about 1/2 of the area of said light shielding region.

6. A liquid crystal panel according to claim 1, wherein said innermost surface on the liquid crystal side of said second substrate is provided with at least one of a color filter and a microlens.

7. A liquid crystal panel according to claim 1, wherein said flat surface of said planarizing film is formed with a common electrode portion for allowing said first substrate to have a common potential with respect to said second substrate, said common electrode portion being located outside of an effective pixel portion formed by a matrix of said pixels, said common electrode portion comprising a second projection similar to said projection and a conductive film covering said second projection.

8. A liquid crystal panel according to claim 1, wherein said projection is formed of an organic material.

9. A liquid crystal panel according to claim 8, wherein said organic material is a photosensitive or nonphotosensitive acrylic resin or a material containing said acrylic resin as a primary component.

10. A liquid crystal panel according to claim 3, wherein said planarizing film is formed of an inorganic

material, and said projection is formed of an organic material.

11. A manufacturing method for a liquid crystal panel, comprising the steps of:

preparing a first substrate and a second substrate; forming a plurality of pixels in the form of matrix on one surface of said first substrate;

forming a light shielding region between any adjacent ones of said plurality of pixels on said one surface of said first substrate;

forming a planarizing film on said one surface of said first substrate;

forming a projection on a flat surface of said planarizing film at a position in said light shielding region;

bonding said first substrate and said second substrate opposed to each other with a given gap defined therebetween and said projection abutting against an innermost surface of said second substrate; and

filling said given gap with a liquid crystal layer in a hermetically sealed condition.

12. A manufacturing method according to claim 11, wherein said projection is formed of the same material as that of said planarizing film.

13. A manufacturing method according to claim 12,

wherein said step of forming said planarizing film is the same as said step of forming said projection.

14. A manufacturing method according to claim 11, wherein said projection is formed of a material different from that of said planarizing film.

15. A manufacturing method according to claim 11, further comprising the step of forming a pixel electrode on said flat surface of said planarizing film in a region for forming each pixel at a position not covering said projection, after said step of forming said planarizing film and said projection and before said step of bonding said first substrate and said second substrate.

16. A manufacturing method according to claim 11, further comprising the step of forming a pixel electrode on said flat surface of said planarizing film in a region for forming each pixel, after said step of forming said planarizing film and before said step of forming said projection.

17. A manufacturing method according to claim 11, wherein said innermost surface of said second substrate adjacent to said liquid crystal layer is provided with at least one of a color filter and a microlens.

18. A manufacturing method according to claim 15, wherein:

said step of forming said projection includes the

step of forming a second projection similar to said projection on said flat surface of said planarizing film at a position outside of an effective pixel portion formed by the matrix of said pixels; and

    said step of forming said pixel electrode includes the step of forming a conductive film for said pixel electrode and covering said second projection with said conductive film to thereby form a common electrode portion composed of said second projection and said conductive film for allowing said first substrate to have a common potential with respect to said second substrate.

19. A manufacturing method according to claim 11, wherein said step of forming said projection employs an organic material for said projection.

20. A manufacturing method according to claim 19, wherein said organic material is a photosensitive or nonphotosensitive acrylic resin or a material containing said acrylic resin as a primary component.

21. A manufacturing method according to claim 14, wherein said step of forming said planarizing film employs an inorganic material, and said step of forming said projection employs an organic material.

22. A liquid crystal display having a liquid crystal panel according to claim 1.

23. A liquid crystal projector having a liquid

crystal panel according to claim 1.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT